

WHAT IS CLAIMED IS:

1. A method for correcting lightness of an image using a multiscale retinex wherein lightness of a subject pixel of an original image is corrected using a convolution operation of a surround function and surround pixels with respect to the subject pixel of the original image, and the convolution operation is performed over a plurality of scales; and

the surround function has a simplified model such that a value of the surround function is changed in a stepwise way along two axes orthogonal to each other.

2. A method according to claim 1, wherein a sum of image information on the surround pixels positioned at the same distance from the subject pixel and the surround function based on a one-dimensional scale size, the value of the surround function changing in a stepwise way, are subjected to the convolution operation, and a result of the convolution operation is used as a result of another convolution operation.

3. A method according to claim 1, wherein the image information on the surround pixels are read as horizontal

and vertical vector components changing along the two axes in a stepwise way.

4. A method according to claim 1, wherein a scala coefficient K of the surround function used in the convolution operation is calculated based on data dependency on the scala coefficient K previously calculated.

5. A method according to claim 1, wherein the number of the surround pixels to be read out is decreased to reduce the calculation amount of sum-of-products operation in the convolution operation.

6. A method according to claim 1, wherein only one subject pixel is selected with respect to a pixel group consisting of a number of pixels; the convolution operation is performed for the subject pixel; the result of the convolution operation is used as a result of the convolution operation for the other pixels in the pixel group.

7. A method according to claim 1, wherein the log operation in the multiscale retinex is approximately

[illegible]